PREPARATION PLAN

FOR THE

JACKPILE-PAGUATE RECLAMATION ENVIRONMENTAL IMPACT STATEMENT

LAGUNA INDIAN RESERVATION

VALENCIA COUNTY, NEW MEXICO

PREPARED BY

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TASK FORCE LEADER - U.S.G.S.

MAY 1981

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PURPOSE:

The purpose of this document is to consolidate the planning activities for the preparation of the Jackpile-Paguate Environmental Impact Statement.

INTRODUCTION:

The U. S. Geological Survey (GS) and the U. S. Bureau of Indian Affairs (BIA) have decided to prepare jointly an environmental impact statement (EIS) on reclamation of the Jackpile-Paguate Uranium Mine located on the Laguna Indian Reservation, 40 miles west of Albuquerque, New Mexico. A joint lead EIS is necessary because the GS has the responsibility of administering the development of Indian minerals, and the BIA has the responsibility of administering the surface resources of Indian lands. The Memorandum of Understanding (MOU) (attached) between the GS and BIA more fully explains the relationships between the two Bureaus for the preparation of this EIS.

The Jackpile-Paguate Uranium Mine has been operated by the Anaconda Copper Company for 28 years, and is nearing the cessation of operations. The project consists of 3,000 acres of open pits, waste piles, and surface structures, and two active and three abandoned underground mines. A proposed reclamation plan was submitted to the GS on September 11, 1980. The GS and BIA subsequently determined that the approval of the reclamaion plan is a major Federal action. Therefore, the preparation of an environmental impact statement is required. The attached scoping document document provides additional background information.

SCOPING:

Scope:

The scope of the EIS is the reclamation of the Jackpile-Paguate mine site, and of the affected adjacent areas.

Formal Scoping:

A notice of intent to prepare the EIS was published in the Federal Register on February 19, 1981 (46 F.R. 13045), and the Department of the Interior issued a press release on the project on February 27, 1981. A scoping document was prepared by the GS Task Force Leader and mailed to 100 individuals and organizations.

The following organizations were requested to be participating agencies for the EIS:

The Laguna Pueblo
Environmental Protection Agency
Nuclear Regulatory Commission
Department of Energy
Soil Conservation Service
Indian Health Service

All but the Nuclear Regulatory Commission and the Department of Energy responded favorably to this request. However, some organizations will provide consultation and review services only.

Public scoping meetings were held at Laguna, New Mexico, and Albuquerque, New Mexico, on March 16 and 18 respectively. Approximately 175 people attended the meetings, and 25 people presented oral comments. Written comments have also been received.

A scoping meeting with the Laguna Tribal Council was held on March 23, 1981. Close contact has been, and will be maintained with the Tribal Council, throughout the entire process.

The Anaconda Copper Company has been consulted or advised of each step in the EIS process. Consultation meetings between the Task Force Leaders and Anaconda will be held routinely twice monthly.

The GS Task Force Leader has met with personnel from various Federal and State agencies and numerous other parties to discuss the project.

PUBLIC INVOLVEMENT:

Public participation in the preparation of the EIS and the decision making process will be encouraged and facilitated by the following means:

1. Preparation of a scoping document for public viewing (accomplished).

2. Formal scoping meetings (accomplished).

3. Regular briefings of the Laguna Tribal Council.

4. Regular briefings of the Anaconda Copper Company.

5. Consultation and coordination with other Federal, State, and local government officials and other interested parties.

6. Notices in the Federal Register and periodic press releases.

7. Open communication with all concerned parties throughout the entire project.

8. Publication of the draft and final EISs.

9. Public hearings following the release of the draft EIS.

KEY ISSUES AND CONCERNS:

The initial technical evaluation of the project and the scoping meetings with the public, Laguna Pueblo, the Anaconda Copper Company, and various Government agencies have resulted in the identification of the following as the key issues and concerns for the EIS. It is recognized that additional technical evaluation and consultation with interested parties may require that issues be added to, or deleted from, this list at any time during the preparation of the EIS.

Radiological Issues:

1. Radon releases from the disturbed areas.

2. Surface water contamination.

3. Sediment contamination.

4. Ground water contamination from backfill material.

5. Contamination of onsite buildings.

6. Contamination of the human food chain.

7. Contamination from the high-grade boulders along the Rio Paguate and Rio Moquino.

8. Off site contamination:

   a. Homes within the Pueblo of Laguna.

   b. Ore spillage along rail spur.

   c. General area.

9. Total radiation doses from all exposure pathways.

Non-radiological Issues:

10. Future recovery of remaining reserves:

    a. Unmined reserves.

    b. Protore disposition.

11. Abandonment of underground entries (vent holes, shaft, decline, and adits).

12. Subsidence from underground mining operations.

13. Disposition of highwalls.

14. Site stabilization:

    a. Stabilization of Rio Moquino and Rio Paguate channels.

    b. Stabilization of waste pile slopes.

    c. Overall site drainage.

    d. Arroyo cutting.

15. Siltation of Quirk reservoir.

16. Contamination of surface and ground waters.

17. Dispersion of airborne particulates during reclamation.

18. Revegetation of disturbed areas:

    a. Construction of a producting soil profile.

    b. Toxic element concentration.

    c. Species propagation.

19. Protection of wildlife:

    a. Habitat construction.

    b. Endangered species.

20. Protection of cultural, religious, and archaeological sites.

21. Socioeconomic impacts:

    a. Laguna employment during reclamation.

    b. Structural damage to Paguate homes.

    c. Alteration of Laguna lifestyles.

    d. Impacts on health and welfare.

22. Aesthetic impacts.

23. Future land use:

    a. Grazing.

    b. Buildings.

    c. Farming.

    d. Disposition of non-inhabitable surface structures (rail spur, power lines, etc.).

    e. Home construction on site.

24. Floodplain management.

25. Long-term monitoring needs and procedures.

Of the issues listed above, the following are presently considered to be the most crucial to the EIS:

1. Radon releases from the disturbed areas. This issue represents the greatest potential health impact from the project, and must be effectively mitigated.

2. Off site contamination. Very little is presently known about the severity and extent of the off site radiological contamination; however, this was the most common issue raised during the public scoping process.

3. Total radiation doses from all exposure pathways. This is a very complex issue to address, and is the subject of extensive public concern.

4. Contamination of the ground water by backfilling with ore associated waste.

5. Site stabilization. Long-term stability of the site is critical to the success of reclamation, and will be an extremely difficult issue to quantify.

6. Future land use. Facilitating productive land uses and identifying inappropriate uses is a critical aspect of reclamation.

ALTERNATIVES:

Due to the wide range of reclamation alternatives and the highly complex nature of their interaction, it is not possible to list all of the alternatives that will be assessed in the EIS at the present time.

The No Action Alternative and the Anaconda Copper Company's proposed reclamation plan will be assessed in the EIS as required by 40 CFR 1502.14. Additional alternatives will be developed by the Task Force in consultation with the appropriate parties.

The EIS will evaluate the various alternatives and provide a summary for the decision makers. The decision makers will then select the alternative that provides the best fit to the evaluation criteria.

EVALUATION CRITERIA:

The following evaluation criteria will be used to evaluate and compare the various alternatives for reclamation of the site and the affected adjacent areas. It is recognized that no alternative will meet all of these criteria perfectly, and that compromises will be required. In such cases, human health and safety will take precedence.

To the maximum extent practicable, reclamation of the site and the affected adjacent areas will:

1. Ensure the integrity of all existing cultural, religious, and archaeological sites.

2. Eliminate the need for post-reclamation maintenance.

3. Reduce the releases of radioactive elements and radionuclei to the pre-mining site conditions.

4. Stabilize the disturbed areas to assure that adverse environmental impacts do not occur.

5. Return the vegetative cover to a condition comparable to the surrounding area.

6. Provide for additional land uses that may be practically developed from the existing conditions and that are desired by the Pueblo of Laguna.

7. Blend the visual characteristics of the site with the surrounding terrain.

8. Not inhibit efficient future recovery of the remaining reserves.

9. Minimize disturbance of the life styles and culture of the Laguna people.

10. Employ the Laguna people.

BUREAU RESPONSIBILITIES AND TASK FORCE MANAGEMENT:

The responsibilities of the GS and BIA for the preparation of this EIS are defined in the attached MOU.

Each Bureau has appointed a task force leader to oversee its respective work assignments. Marc Nelson, Environmental Scientist, with the Conservation Division in Albuquerque, New Mexico, is the GS Task Force Leader, and has overall responsibility for the project. Bill Allan, Area Environmental Quality Specialist, with the BIA in Albuquerque, New Mexico, will coordinate activities for the BIA.

The Conservation Manager, South Central Region, GS will provide space for the primary task force office in Albuquerque, New Mexico. Task force personnel not located in this office must secure secretarial and administrative support in their own offices.

The majority of the technical assessment will be prepared by personnel assigned to the task force. These persons will develop reports on the subject areas assigned to them. The contracting of studies may be necessary to assess certain technical issues. The GS Task Force Leader, with the assistance of various other personnel, will prepare the draft and final EISs from these reports and contracted studies.

The task force will meet at places and times which best serve its needs. Consultants, editors, writers, and other parties will also meet with the task force when their services are necessary. Individuals will be permitted to visit the mine site, as needed to accomplish their technical assignments. However, task force members will work primarily at their home offices to research and write the reports assigned to them (and/or serve as technical project officers on contractural studies). All travel expenditures must be approved by the GS Task Force Leader. Editorial support for GS activities will be provided by the USGS Environmental Affairs Office (EAO) in Denver, Colorado.

PERSONNEL:

The Jackpile-Paguate EIS requires that personnel be assigned to the task force to assess certain technical issues. With the exception of the GS Task Force Leader, task force duties will not require all of any individual's time. No task force member is expected to devote more than 50 percent of his/her time to the EIS during the 18 month preparation time, and most will spend considerably less than 50 percent.

Several task force members also may be required to assemble information and assist in the preparation of the DEIS and FEIS.

Individuals serving as technical project officers on contractural studies will be responsible for assuring timely completion and financial accountability for their individual projects. They will be expected to maintain close surveillance of contractor activities and to comply with all applicable GS procedures, directives, and regulations.

The following personnel have been assigned to the EIS Task Force:

GS Personnel:

Conservation Division:

Marc Nelson, GS Task Force Leader, Albuquerque, New Mexico. Overall responsibility for project planning, coordination, and for preparation of the draft and final EIS.

Vernon Rulli, Mining Engineer, Albuquerque, New Mexico. Provides expertise in mining and abandonment activities.

Wayne Lambert, Environmental Geologist, Albuquerque, New Mexico. Provides expertise in environmental geology relating to site stability.

Chuck Campbell, Environmental Scientist, Reston, Virginia. Provides coordination between GS Headquarters and GS Task Force Leader.

David Sitzler, Mining Engineer, Albuquerque, New Mexico. Provides expertise in mining engineering.

Dennis Umshler, Geologist, Albuquerque, New Mexico. Provides expertise in geology and Federal contracting procedures.

John M. Andrews, Jr., Environmental Scientist, Albuquerque, New Mexico. Provides expertise in meterology and air quality.

Gary Stephens, Environmental Scientist, Albuquerque, New Mexico. Provides expertise in biology and wildlife management.

Geologic Division:

Bill Smith, Engineering Geologist, Denver, Colorado. Provides expertise in engineering geology relating to highwall and waste pile slope stability.

Kit Fuller, Geographer, Denver, Colorado. Provides expertise in geography and environmental geology relating to site stability.

Elmer Santos, Geologist, Denver, Colorado. Provides expertise in geology and reserve calculations.

Water Resources Division:

Dennis Risser, Hydrologist, Albuquerque, New Mexico. Provides expertise in hydrology and geochemistry.

Harold Zehner, Hydrologist, Louisville, Kentucky. Provides expertise in hydrology and geochemistry.

BIA Personnel:

Bill Allan, BIA Task Force Leader, Albuquerque, New Mexico. Overall responsibility for coordinating BIA input into the EIS and consultation with the GS Task Force Leader.

Noel Marsh, Range Management Specialist, Albuquerque, New Mexico. Provides expertise in range management and revegetation techniques.

George Farris, Chief, Environmental Services Branch, Washington, D. C. Provides coordination between BIA Headquarters and BIA Task Force Leader.

Others:

The following organizations will also assist in the preparation of the EIS:

Environmental Protection Agency - The Office Radiation Programs will prepare various radiological reports and will provide extensive radiological consultation.

Pueblo of Laguna - The Pueblo of Laguna will prepare reports of the past and present land use of the site and surrounding areas.

Indian Health Service - The Office of the Principal Sanitarian, Albuquerque, New Mexico, will assist the Environmental Protection Agency in the collection of radiological data and will provide consultation on health issues.

Department of Energy - The Department of Energy has agreed to coordinate an airborne gamma survey of the site..

Council of Energy Resource Tribes (CERT) - The Council of Energy Resource Tribes, as a representative of the Pueblo of Laguna, will prepare a socio-economic report and will provide consultation on various other issues.

Soil Conservation Service - The Soil Conservation Service will provide consultation on various issues.

SCHEDULE:

The GS and BIA have placed a high priority on preparation of this EIS because delays will accentuate the socio-economic impacts on the Pueblo of Laguna and will increase the costs of reclamation for the Anaconda Copper Company.

The Jackpile-Paguate EIS task force commenced activities in April 1981, although planning and scoping activities began in February 1981. The DEIS and FEIS are scheduled for completion in April 1982 and September 1982, respectively. A decision document will be executed within 60 days after the completion of the FEIS. Although the project is extremely complex, there is no reason to believe at this point, that this schedule cannot be met.

Contractural studies are a potential problem area because of the delays inherent to the Federal contracting procedures. The appropriate personnel will be contacted, as necessary, to ensure that a high priority is accorded to the processing of these contracts.

PREPARATION PROCEDURES AND FORMAT:

Preparation Procedures:

The task force will follow the GS procedures for preparation of the EIS as modified by the attached Memorandum of Understanding. The project has the following key sign-off or approval points:

1. Memorandum of Understanding between GS and BIA for preparation of the EIS. Executed by the Director, U. S. Geological Survey and the Commissioner of Indian Affairs.

2. Preparation Plan. Requires the approval of the Assistant Director of the U. S. Geological Survey for Resource Programs and the Director of the Bureau of Indian Affairs, Office of Trust Responsibilities.

3. Publication of the draft and final EIS. Requires the approval of the Assistant Secretary of the Interior for Energy and Minerals; the Assistant Secretary of the Interior for Indian Affairs, and the Assistant Secretary of the Interior for Policy, Budget, and Administration.

4. Execution of a Decision Document. Performed by the GS with the concurrence of the BIA.

Format:

The Council of Environmental Quality's recommended format will be used for the EIS. This format is outlined in 40 CFR 1502.10, and is shown below:

1. Cover sheet.

2. Summary.

3. Table of Contents.

4. Purpose and Need for Action.

5. Alternatives, Including the Proposed Action.

6. Affected Environment.

7. Environmental Consequences.

8. Appendices:

   a. List of Preparers.

   b. List of Agencies, Organizations, and Persons to Whom Copies of the Statement are Sent.

   c. Index.

   d. Substantive Review Comments (Final EIS only).

   e. Other.

EXPENDITURES:

An agreement was reached between the GS and BIA for funding of the EIS whereby the BIA transferred $100,000 to the EIS account which is controlled by the GS. The GS will provide the remainder of the EIS funding up to a maximum GS expenditure of $350,000, for a combined total of $450,000. The BIA will not charge salaries or travel to the EIS account. Any additional funding needs beyond the $450,000 limit will be negotiated at a later date.

PROJECTED EXPENDITURES (EXCLUDING CONTRACTS)

FISCAL 1981

Salaries and Benefits	$140,000
Travel	$ 15,000
Other (printing, supplies, etc.)	$ 5,000
	$160,000

FISCAL 1982

Salaries and Benefits	$140,000
Travel	$ 20,000
Other (printing, supplies, etc.)	$ 25,000
	$185,000

TOTAL: $345,000

CONTRACTS:

There are presently no plans to issue formal contracts to private organizations, however, the need for such contracts may emerge from further technical assessment of the issues. The following studies/surveys will be performed under agreements between the GS and other Federal agencies:

STUDY/SURVEY	COST
1. Airborne gamma survey. To be performed by EG and G, Inc. under an existing contract with the Department of Energy.	$50,000
2. Radon flux in Pueblo of Laguna homes and in on site buildings. To be performed by the Environmental Protection Agency and the Indian Health Service.	$10,000

3. Total radiation dose calculations. To be performed by the Environmental Protection Agency.	$50,000
4. Socio-economic study. To be performed by the Council of Energy Resource Tribes.	$15,000
TOTAL:	$125,000
TOTAL PROJECTED EXPENDITURES	$470,000

The GS Task Force Leader is responsible for approving and monitoring all expenditures from the EIS account. Close consultation with the Environmental Affairs Office, GS, will be maintained for all fiscal matters.